The Cary Arboretum

of The New York Botanical Garden

A Newsletter published bi-monthly for Friends of the Arboretum by the Public Affairs Department.

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Box AB
Millbrook, N.Y. 12545

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In This Issue

Russian Scientist Visits Arboretum

Dr. P. I. Lapin, vice director of the Main Botanic Garden in Moscow, presented a seminar entitled "Research in the Description of Winter Hardy Aboreal Plants" on May 28 at the Dutchess County Farm and Home Center, at the invitation of the Cary Arboretum.

After the seminar Dr. Lapin toured the Arboretum grounds to see the progress since his last visit four years ago.

Dr. Lapin was in this country for a two-week tour, first stopping at the University of Minnesota and and then at the New York Botanical Garden.

In New York, Dr. Howard S. Irwin, president of the Garden, and Dr. Lapin ironed out final details for further scientific cooperation between the two countries under terms of an agreement between Russia and the United States negotiated two years ago by the two botanists. Both officials hope to both expand the scope of plant and information exchanges and reciprocal visits by scientists from both countries.

In his talk in Millbrook, Dr. Lapin expressed the hope that this type of scientific cooperation will help strengthen world peace.

Arboretum Publishes New Book: "Buildings and the Environment"

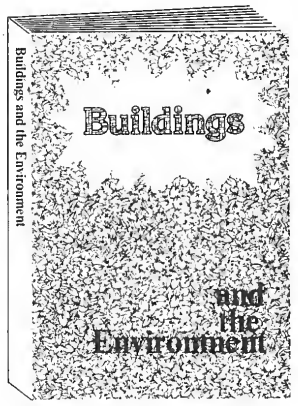
Buildings consume more than one-third of all energy used today in the United States. Because of the high and increasing cost of fuel, ideas for saving energy in construction and building operation – even ideas regarded as unorthodox a few years ago – are now very practical.

A new book "Buildings and the Environment," edited by Dr. Robert Goodland of the Cary Arboretum and written by a panel of energy and building experts, may help save energy by advancing new concepts in design and construction for use in environmentally oriented buildings.

Among the many topics covered are solar heating, underground and vernacular architecture, task lighting, natural insulation, and waterless waste disposal. The twelve contributors explain how the environment can be tapped to provide an abundant source of free heat, cooling, ventilation, protection against the elements, and building material.

Extensive, easy-to-use bibliographies and directories of equipment suppliers for environmentally built structures make this book a useful and timely guide to the latest thinking in its field.

"Buildings and the Environment," containing approximately 266 pages, has been published by the Cary Arboretum. Copies may be ordered at $10.00 each, including postage and handling, from the Cary Arboretum, Box AB, Millbrook, New York 12545.



Ed Setliff – Forest Pathologist

"In Search of the Wood Decay Fungi" could easily be the title of a book about Dr. Edson C. Setliff, the Arboretum's forest pathologist-mycologist, whose research on tree diseases and wood decay has required travels to the Caribbean, East Africa, and other places abroad and at home. Dr. Setliff specializes in the field of applied mycology, the study of fungi, and his interest often takes him in the field. "My hobby is my work," remarks Ed, who pursues the hidden fungi with notebook, sample bags, and camera. The diversity of the Arboretum's forest provides an ideal location for this endeavor.

Having grown up in North Carolina, Ed first came north to work on his Master's Degree at Yale University before taking off for the tropics. His graduate work in forest pathology at Yale dealt with the physiology of wood decay, and it was this interest, good will, and a desire for adventure that led him to join the Peace Corps in 1964 as part of an agricultural research team in Tanzania (then Tanganyika). In East Africa Ed helped to establish tree nurseries in the coastal region, and studied forest pathogens, including a root-rot disease of *Cupressus* trees. Through

(continued on page 4)

Wildflowers Can Be Found Everywhere

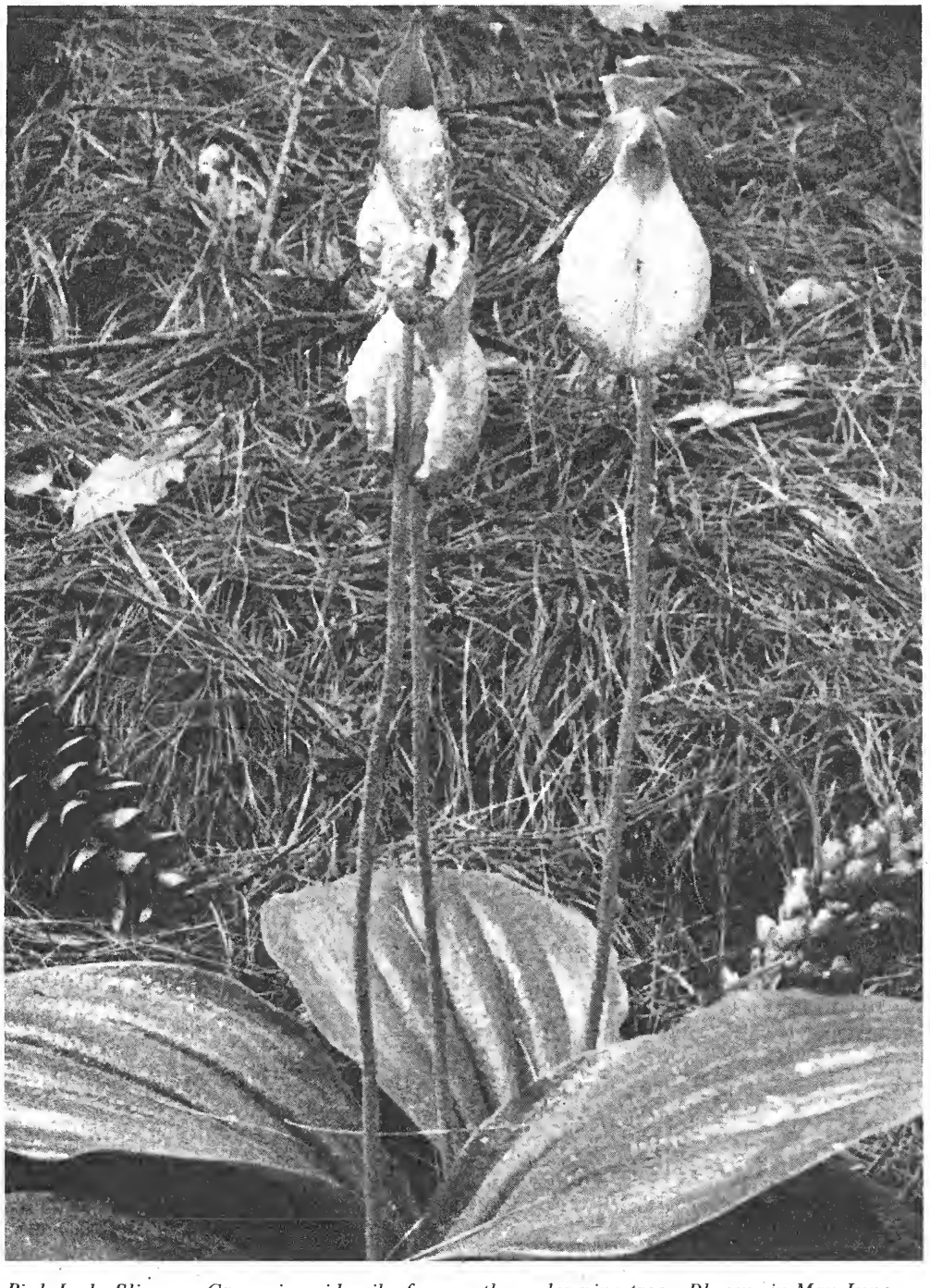
The Arboretum's diverse terrain provides ideal habitat for a myriad of wildflowers. From the Canoe Hills to the meadows and lowlands, there are a rich and wide variety of species.

Friends of the Arboretum are invited to walk its internal roadways in search of wildflowers. But, you may also have good luck finding wildflowers in your own backyard or favorite hiking spot. Wildflowers can be found almost everywhere. Not only can you find them growing behind your home, but they frequent most fields, swamps, and roadsides in the Hudson Valley. In fact, more species can be seen on a ride along the Taconic Parkway than in a deep woods. Why? Because leaves block sunlight as spring turns to summer. Then open areas like meadows, lowlands, and roadsides become optimum places to locate wildflowers.

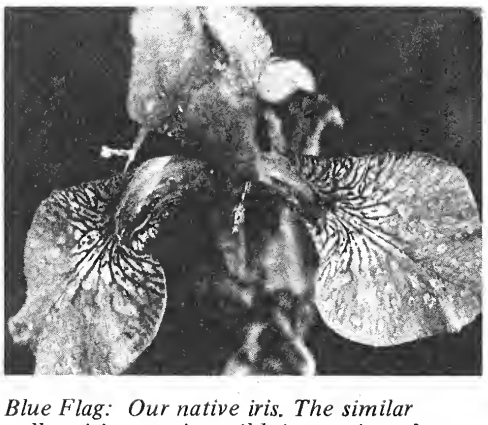
On your excursions, whether it be on the Arboretum roads or some favorite woodland, learn to enjoy wildflowers. Observe, photograph, and study them, but please leave them for others to enjoy. They are a part of a natural heritage that must be preserved.

To help enhance your wildflower appreciation, obtain a good guide book. The Roger Tory Peterson volume would be an excellent choice to carry afield. Its compact size fits easily into most field packs, and its lavishly illustrated color depictions of flowers make identification seem easy. For a more comprehensive wildflower guide, consider the set of volumes "Wildflowers of the U. S.", by Dr. Harold Rickett – a New York Botanical Garden (NYBG) publication. Another good book is "Plants of the Vicinity of New York", by H. A. Gleason, published by the NYBG. Any of these books may be ordered by writing to the Garden Shop at the New York Botanical Garden, Bronx, New York 10458.

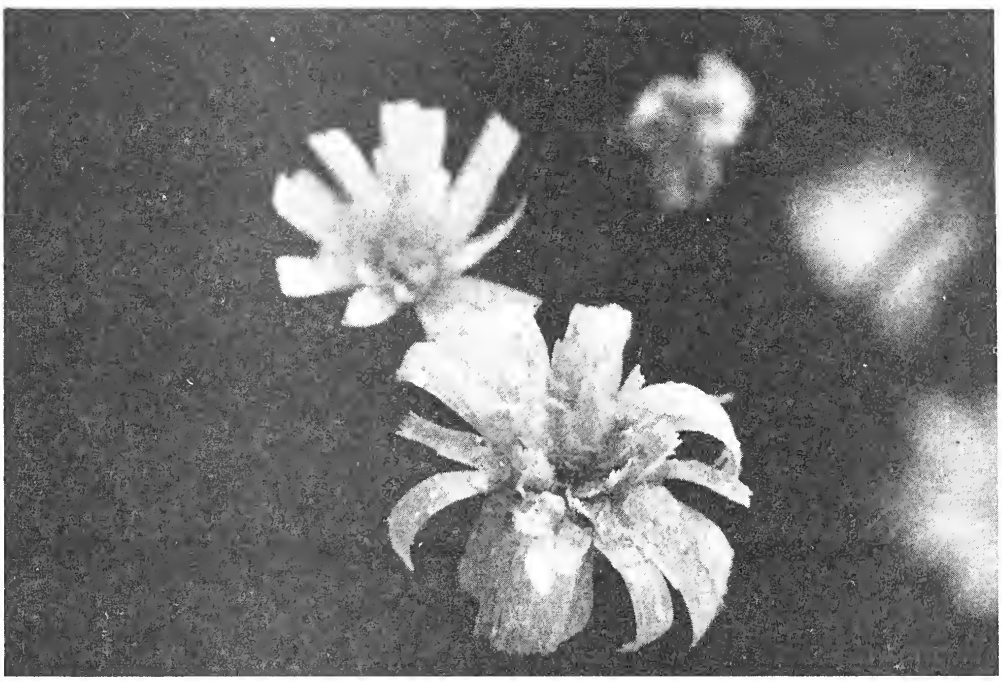
And so, come walk on a vicarious pictorial journey to see just a few of the common and less common species that grow in the Arboretum woodlands and meadows.



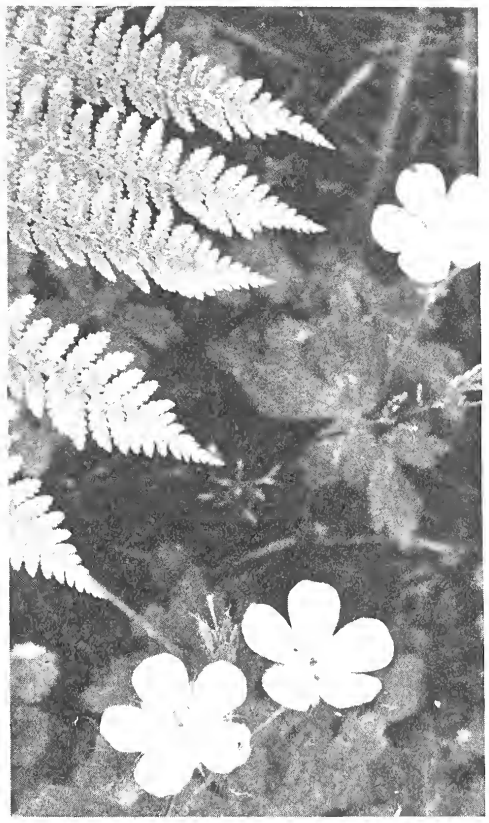
Pink Lady Slipper: Grows in acid soils, frequently under pine trees. Blooms in May-June. Endangered or rare species. Please do not pick.



Blue Flag: Our native iris. The similar yellow iris, growing wild, is a native of Europe that escaped from gardens. Blue Flag prefers marshes and wet meadows and can be seen blooming in May-July.



King Devil: One of the many yellow hawk weeds belonging to the daisy family. Its tall stalks fill the summer fields with color.



Wild Geranium: This native geranium ean be found in woods and along shady roadsides. Its rose or purple flowers bloom in April-June.

Dewberry: One of the wild blaekberries. It ean be distinguished from the eommon blackberry by the thorny vines lying close to the ground. The small white flowers of the Dewberry ean be seen along roadsides and open fields.

Ed Setliff *(continued from page 1)*

his work in the Peace Corps Ed became familiar with many of the tropical wood decay fungi, particularly the bracket fungi or polypores, which are the main thrust of his present research at the Cary Arboretum.

Upon leaving the Peace Corps Ed decided to resume his studies in mycology and enrolled in the College of Environmental Science and Forestry at Syracuse University, where he continued to do research on the East African root-rot organism *Poria vincta.* He completed his Ph.D. in 1970 and went to the University of Wisconsin to work in the Department of Plant Pathology with Dr. Robert Patton, a noted forest pathologist specializing in root rots and in needle blight diseases of conifers.

At Wisconsin Dr. Setliff continued his research on tree diseases and worked in cooperation with the department's extension service and with government agencies such as the Wisconsin State Department of Agriculture, and the U. S. Forest Service, Center for Forest Mycology Research. During his stay at Wisconsin, Ed also became interested in studying fungi with the electron microscope.

In 1973 Dr. Setliff came to the Cary Arboretum to set up a research program in forest pathology. His experience has prepared him well for the job, and his skill in research and in liaison work has been evident in his many accomplishments here in just three years.

Because the Arboretum's new research building will not be ready until 1977, Ed has established a laboratory in the Biology Department at Vassar College, where he is now an adjunct associate professor. He has been able to make use of the electron microscope facilities at Vassar and is now completing a study on nuclear division in certain wood decay fungi. He expects to continue using the lab at Vassar as well as one in the Arboretum's solar-heated building when that is completed, thereby helping to fulfill part of the Arboretum's philosophy of developing close ties with local educational institutions.

He also is working with the New York State Department of Environmental Conservation in studying diseases of pine and other forest trees. Ed has published several articles on diseases of pine and juniper in the Northeast. Locally Dr. Setliff gives advice and assistance to companies and the public on the diagnosis and control of tree diseases.

The focus of Dr. Setliff's most recent work is identifying and testing fungi which catabolize lignin. Here his experience with tropical wood decay fungi has been helpful. "Generally speaking, tropical woods have more lignin than temperate species," Ed explains, "and there may have been a natural selection pressure for the ability to degrade lignin in tropical wood rotters." His research has taken him to Puerto Rico and the southern United States to collect these fungi in pure culture for later testing. If funding should become available, he would also like to extend his studies on wood rotting fungi and develop methods for growing edible mushrooms on wood or other organic waste products.

Ed's interest in fungi goes beyond the laboratory. He enjoys taking people on "mushroom walks" for the Arboretum's education program, and he gives talks on fungi and forest ecology at several of the nature centers in the area, as well as local garden clubs. Other interests are history and photography. He has helped to locate old sites and foundations on the Arboretum property and has been involved in the restoration of some. Ed's photography, of course, is mainly of nature.

Ed lives in Pleasant Valley with his wife Dorene and his children Eric and Alissa – all either practicing or aspiring mycologists. Dorene also graduated from the College of Environmental Science at Syracuse with a Ph.D. in mycology. She has been working in the Vassar College Biology Department as a laboratory administrator and will be teaching Biology there in the fall.

Third Lot of Chinese Seeds Received by Cary Arboretum

The third shipment of plant seeds from the Peoples' Republic of China has been received.

Forty species of trees, shrubs, and vines arrived a few weeks ago from Nanking Botanical Garden. It was the third shipment received by the Arboretum since the seed exchange program was initiated two years ago.

The first arrival, consisting of nine seed packets, reached the Arboretum in July 1974. It was the first shipment of plants from mainland China to an American institution in more than 20 years. The second shipment of 82 species arrived last March from Peking.

Among the interesting items in the latest shipment are several trees and shrubs which are Chinese counterparts to varieties native to New York State. These include species of Chinese maple, chestnut, hackberry, honey-locust, spice bush, tulip tree, magnolia, oak, sumac, and linden.

As these seedlings mature, they will be planted in the outdoor nursery and then transferred to permanent locations on the Arboretum grounds. Most woody plants require 20-50 years before reaching maturity.

Dr. Elias Appointed to Committee

At the annual meeting of the American Society of Plant Taxonomists at Tulane University in New Orleans, Dr. Thomas S. Elias, assistant director of the Cary Arboretum, was appointed to the newly formed committee on environment and public policy. He will represent District Five or the Northeastern United States.

The committee will be responsible for matters relating to endangered species, proposed or pending Federal legislation, international activities and public policy.

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of
THE NEW YORK
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Box AB
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